

AMENDMENTS IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of setting a sending transmit rate for transmitting an outgoing data frame from a network node along a network which includes telephone wiring as a network medium, the method comprising:

receiving incoming frames from ~~the~~ other nodes;

extracting, from each of at least some of the incoming frames, both a source node address corresponding to a source node of ~~the~~ an incoming frame, and a desirable transmission rate for transmitting data between the network node and the source node;

storing, in a storage device at the network node, a look-up table with multiple entries, each of the entries including a ~~desirable transmission rate and a corresponding node address~~, ~~wherein the storing includes storing the source node addresses and the desirable transmission rates~~ node address and a corresponding desirable transmission rate extracted from each of the at least some of the incoming frames; and

determining the sending transmit rate for an outgoing frame sent to a destination node having a an outgoing frame destination address, the determining the sending transmit rate for the outgoing frame including:

comparing the outgoing frame destination address to ~~the~~ node addresses stored in the storage device to determine whether a corresponding entry exists in the storage device which corresponds to the outgoing frame destination node; ~~and~~

if the corresponding entry exists, setting the sending transmit rate equal to the corresponding desirable transmission rate of the entry,

wherein the network node includes a network medium interface device which includes at least two Physical Layer Devices (PHYs), the PHYs having different operating characteristics;
and

controlling selection of an active PHY from among the PHYs based on capabilities of the outgoing frame destination node to which the frame is to be transmitted.

2. (Original) The method of claim 1, wherein the determining includes, if the corresponding entry in the storage device does not exist, setting the sending transmit rate equal to a default rate.

3. (Original) The method of claim 1, further comprising communicating the sending transmit rate to one or more physical layer devices of the network node.

4. (Currently Amended) The method of claim 1, wherein the extracting includes determining whether the incoming frame is a specialized capability announcement frame, and extracting the desirable transmission rate ~~information~~ from ~~the~~ specialized capability announcement frames.

5. (Currently Amended) The method of claim 1, wherein the storing includes examining the entries in the storage device to determine if a corresponding entry is present in the storage device, which corresponds to the source node address of a respective one of the incoming frames from which the ~~information related to~~ desirable transmission rates was were extracted.

6. (Original) The method of claim 5, wherein the storing includes, if the corresponding entry is present, updating the corresponding entry.

7. (Original) The method of claim 6, wherein the storing includes, if the corresponding entry is not present, adding a new entry or replacing an existing entry.

8. (Currently Amended) The method of claim 1, wherein the extracting includes determining whether the incoming frame is a capability and status announcement (CSA) frame, or is a rate request control frame (RRCF) with a RRCF destination address corresponding to the network node, and extracting desirable transmission rates ~~rate information~~ from the CSA frames and the RRCFs with a RRCF destination address corresponding to the network node.

9. (Original) The method of claim 8, further comprising communicating the sending transmit rate to one or more physical layer devices of the network node.

10. (Original) The method of claim 9, wherein the determining includes, if the corresponding entry in the storage device does not exist, setting the sending transmit rate equal to a default rate.

11. (Currently Amended) The method of claim 10, wherein the storing includes examining the entries in the storage device to determine if a corresponding entry is present in the storage device, which corresponds to the source node address of a respective one of the incoming frames from which the ~~information related to~~ desirable transmission rates ~~was~~ were extracted.

12. (Original) The method of claim 11, wherein the storing includes, if the corresponding entry is present, updating the corresponding entry.

13. (Original) The method of claim 12, wherein the storing includes, if the corresponding entry is not present, adding a new entry or replacing an existing entry.